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--26. A removal device for an occlusion in a body passageway comprising:

a catheter for insertion into a body passageway, said catheter having a distal end, a support wire insertable through said catheter, said wire having a distal end,

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10 a multi-wing malecot style blocking element on the distal end of said catheter, an annular membrane around said wings of said blocking element,

said blocking element having a radially compressed state for insertion into the body passageway and a radially expanded state extending near to the wall of said passageway to block passage of material around the outside of the distal end of said catheter, and

15 an occlusion engaging element supported on said distal end of said wire, said engaging element having a radially compressed state for insertion of said wire through said catheter and through or around whatever occlusion is to be engaged and a radially expanded state to engage the
20 occlusion,

expansion of said engaging element when positioned distally of an occlusion and subsequent proximal movement of said engaging element forcing the occlusion into said catheter.

27. The removal device of claim 26 wherein said annular membrane is elastomeric.

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3/ 28. The removal device of claim 26 wherein said
occlusion engaging element is a braided element having
individual filaments sufficiently flexible to be moved between
said states and sufficiently stiff to substantially hold said
5 expanded state when removing the targeted occlusion.

ai 4/ 29. The removal device of claim 27 wherein said
occlusion engaging element is a braided element having
individual filaments sufficiently flexible to be moved between
said states and sufficiently stiff to substantially hold said
5 expanded state when removing the targeted occlusion.

30. In a catheter for use in removing an occlusion
from a body passageway into which the catheter is placed, the
improvement comprising:

5 a multi-wing blocking element near the distal
end of the catheter, an annular membrane around said wings of
said blocking element,

said blocking element having a radially
retracted insertion state and a radially expanded blocking
state,

10 an actuator associated with said catheter to
move said blocking mechanism between said retracted state to
said expanded blocking state,

15 expansion of said blocking element when said
catheter is inserted into a body passageway assuring that
material being removed in a proximal direction from a position
in said passageway that is distal of said catheter will enter
the lumen of said catheter and will be blocked from the body
passageway external of said catheter.

31. The improvement of claim 30 wherein said membrane is elastomeric.

32. The improvement of claim 30 wherein said blocking element is a malecot type device.

33. In the method of removing an occlusion from a body passageway, the improvement comprising the steps of:

inserting a catheter into a body passageway, said catheter having at a distal end a blocking mechanism,

providing said blocking mechanism in a radially compressed state during insertion of said catheter into the passageway, and

radially expanding said blocking mechanism into a funnel shaped radially expanded state extending near to the wall of said passageway after insertion of said catheter into the passageway to block passage of material around the outside of the distal end of said catheter.

34. The method of claim 33 wherein said blocking mechanism is a multi-wing device having an annular membrane around said wings. --